

WHAT IS CLAIMED IS:

1 1. A thin film transistor array panel comprising:
2 a substrate;
3 a gate line formed on the substrate and including a gate electrode;
4 a gate insulating layer formed on the gate line;
5 a semiconductor layer formed on the gate insulating layer;
6 a data line formed at least in part on the semiconductor layer;
7 a drain electrode formed on the semiconductor layer at least in part and separated from
8 the data line;
9 a first passivation layer formed on the data line and the drain electrode;
10 a first protrusion formed on the first passivation layer and disposed opposite the data line;
11 and
12 a pixel electrode formed on the first passivation layer and connected to the drain
13 electrode.

1 2. The thin film transistor array panel of claim 1, wherein the pixel electrode has a
2 cutout.

1 3. The thin film transistor array panel of claim 2, further comprising a second
2 protrusion disposed in the cutout.

1 4. The thin film transistor array panel of claim 2, further comprising a storage
2 electrode line overlapping the pixel electrode.

1 5. The thin film transistor array panel of claim 4, wherein the storage electrode line
2 comprises an expansion overlapping the drain electrode.

1 6. The thin film transistor array panel of claim 4, wherein the storage electrode line
2 comprises a branch overlapping the cutout.

1 7. The thin film transistor array panel of claim 1, wherein the first protrusion is
2 wider than the data line.

1 8. The thin film transistor array panel of claim 1, wherein the data line is curved.

1 9. The thin film transistor array panel of claim 1, further comprising a spacer having
2 a height larger than the first protrusion and disposed on the same layer as the first protrusion.

1 10. The thin film transistor array panel of claim 9, wherein the first protrusion and the
2 spacer comprise organic material.

1 11. The thin film transistor array panel of claim 1, further comprising a color filter
2 disposed between the first passivation layer and the first protrusion and the pixel electrode.

1 12. The thin film transistor array panel of claim 11, further comprising a second
2 passivation layer formed on the color filter and the first protrusion and the pixel electrode.

1 13. The thin film transistor array panel of claim 1, wherein the semiconductor layer
2 has substantially the same planar shape as the data line and the drain electrode.

1 14. A thin film transistor array panel comprising:
2 a substrate;
3 a gate line formed on the substrate and including a gate electrode;
4 a gate insulating layer formed on the gate line;
5 a semiconductor layer formed on the gate insulating layer;
6 a data line formed at least in part on the semiconductor layer;
7 a drain electrode formed on the semiconductor layer at least in part and separated from
8 the data line;
9 a first passivation layer formed on the data line and the drain electrode and having a
10 contact hole exposing the drain electrode at least in part;
11 a pixel electrode formed on the first passivation layer and connected to the drain
12 electrode through the contact hole; and
13 a protrusion formed on the first passivation layer and disposed in the cutout at least in
14 part.

1 15. The thin film transistor array panel of claim 14, further comprising a storage
2 electrode line overlapping the pixel electrode.

1 16. The thin film transistor array panel of claim 15, wherein the storage electrode line
2 comprises an expansion overlapping the drain electrode.

1 17. The thin film transistor array panel of claim 15, wherein the storage electrode line
2 comprises a branch overlapping the cutout.

1 18. The thin film transistor array panel of claim 14, wherein the data line is curved.

1 19. The thin film transistor array panel of claim 14, further comprising a spacer
2 having a height larger than the protrusion and disposed on the same layer as the protrusion.

1 20. The thin film transistor array panel of claim 19, wherein the protrusion and the
2 spacer comprise organic material.

1 21. The thin film transistor array panel of claim 14, further comprising a color filter
2 disposed between the first passivation layer and the protrusion and the pixel electrode.

1 22. The thin film transistor array panel of claim 21, further comprising a second
2 passivation layer formed on the color filter and the protrusion and the pixel electrode.

1 23. The thin film transistor array panel of claim 1, wherein the semiconductor layer
2 has substantially the same planar shape as the data line and the drain electrode.

1 24. A liquid crystal display comprising:
2 a first substrate;
3 a gate line formed on the first substrate;
4 a data line intersecting the gate line;
5 a thin film transistor connected to the gate line and the data line;
6 a pixel electrode connected to the thin film transistor and having a first cutout;
7 a second substrate facing the first substrate;

8 a common electrode formed on the second substrate and having a second cutout; and
9 a first protrusion disposed in at least one of the first and the second cutouts at least in
10 part.

1 25. The liquid crystal display of claim 24, further comprising:
2 a light blocking member disposed on one of the first and the second substrates; and
3 a color filter disposed on one of the first and the second substrates.

1 26. The liquid crystal display of claim 24, further comprising a second protrusion
2 disposed on the data line.

1 27. The liquid crystal display of claim 24, wherein the first cutout does not overlap
2 the second cutout.